

REMARKS

Claims 1 and 3-10 are pending in this application, of which claim 1 has been amended.

No new claims have been added.

Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 4,867,691 to Eck (hereafter, "Eck").

Applicants respectfully traverse this rejection.

Eck discloses a contact for a connector having a barrel portion having a layer of a reflowable solderable material disposed on the inner and outer surfaces thereof. The barrel is expandable from a first to a second dimension upon the insertion of a camming member thereinto. The contact is disposed in a connector that is used in conjunction with a pin header and a board with plated through holes therein. The barrels, when inserted into the through holes from one surface of the board, are expanded by the receipt of pins or wires inserted into the barrels from a header disposed on the other side of the board.

Eck discloses that reflowable solderable material coats the inner and outer surfaces and column 4, lines 44-50 define reflowable solderable material as follows:

The term "reflowable solderable material" is meant to include any alloy which when exposed to a temperature of approximately 420°F. goes from a solid to a flowable state. Preferably the material is a 60/40 or 93/7 alloy of tin and lead. A thickness of each layer 32, 34 on the order of two hundred to three hundred micro inches is preferred.

This is in contrast to the present invention, in which the conductive plating is composed of tin, gold, silver, nickel or palladium. Because the plated second conductive portion is bent

into “a shape having an annular transverse cross section,” the reflowable solderable material of Eck would not be a satisfactory material for the plating, since the reflowable solderable material is brittle when solid and not easily shaped.

On July 25, 2006 the undersigned conducted a telephonic interview with the Examiner. In the interview, the Examiner noted that column 4, lines 29-50 of Eck disclose that the exterior surface 14E of the barrel 14 is provided with a layer of “reflowable solderable material indicated by reference characters 32, 34, respectively.” This reflowable solderable material consists of a tin-lead alloy. In Eck, after connection to the socket occurs, the reflowable solderable material is heated so that it flows to form a secure electrical connection. The undersigned pointed out to the Examiner that the outer plating layers of the instant application are not formed of reflowable solderable material, but the Examiner noted that such a limitation was not covered by the proposed claim amendments.

In the present invention, the plating layers for the conductive plate material are formed from one of gold, silver, copper, nickel, palladium and tin, as disclosed from page 6, line 25 to page 26, line 1 of the specification of the instant application. In the present invention, the tin used as plating layer material is not used with any another metal in a reflowable solderable alloy.

Accordingly, claims 1 and 6 have been amended to recite this distinction.

Thus, the 35 U.S.C. § 102(b) rejection should be withdrawn.

Claims 1, 4, 5 and 9 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 3,764,955 to Ward (hereafter, “Ward”).

Applicants respectfully traverse this rejection.

Ward discloses connecting and mounting means for substrates comprising an elongated mounting bar having connecting devices mounted therein at spaced intervals. The connecting devices have aligned spring receptacles which receive and support the substrate and have posts which are adapted to enter holes in a printed circuit board.

The Examiner has admitted that Ward fails to disclose the conductive plate material being provided with plating layers on front and back sides thereof, but has cited Eck for teaching this feature. As noted above, Eck fails to disclose the plating material of the claimed invention, which is not reflowable solder.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Sawada in view of Neff et al. (both previously applied).

Applicants respectfully traverse this rejection.

The Examiner has urged that Neff et al. discloses a connector (FIGS. 2-3) comprising a connection portion having an annular transverse cross section with the cut surfaces being located inside the annular cross-sectional shape and that it would be obvious to combine the teachings of Neff et al. with those of Sawada to teach the present invention.

Applicants respectfully disagree. Neff et al. is directed to an electrical splice for a wire wound resistor, where the resistor is round in cross section. This is unrelated to the present invention, in which a circuit board connector has a second connection portion having an annular

transverse cross section where the cut surfaces are located inside the annular cross-sectional shape, as shown in FIGS. 8-9 of the instant application. Thus, it would not be obvious to combine the electrical splice construction of Neff et al. and the teaching of Sawada to teach the present invention.

Claim 1 of the instant application specifically requires that the outer circumferential surface of one of the plating layers be connected to the terminal connecting socket, which is not taught by Neff et al. In Neff et al., it is the inner surface that connects with the resistor.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Sawada in view of Neff et al. and further in view of Singh.

Applicants respectfully traverse this rejection.

As noted above, Neff et al. is not combinable with either Sawada or Singh because Neff et al. is from another field of endeavor unrelated to the circuit board connector of the claimed invention.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

Claims 6 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 6,305,949 to Okuyama et al. (previously applied) in view of Neff et al.

Applicants respectfully traverse this rejection.

Okuyama et al. discloses a press-fit pin for use with a printed circuit board assembly consisting of two opposed printed circuit boards, the press-fit pin having an upper first press-fit

section and a lower second press-fit section. The first press-fit section and the second press-fit section are disposed so that the first press-fit section enters the first through-hole in the first printed circuit board before the second press-fit section enters the second through-hole in the second printed circuit board.

The Examiner has admitted that Okuyama et al. fails to disclose the second connection portion (1b) having an annular transverse cross section with the cut surfaces being located inside the annular cross-sectional shape, but has cited Neff et al. for teaching this feature.

As noted above, Neff et al. does not relate to circuit board connectors and therefore cannot be combined with the teachings of Okuyama et al. to teach the present invention.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1 and 3-10, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No. **10/537,436**
Response to Office Action dated May 4, 2006

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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